

REMARKS

I. INTRODUCTION

Claims 4 and 20 have been amended above to remove minor informalities therefrom, and not for any reasons associated with patentability thereof. New claims 37-42 have been added. Accordingly, claims 1, 4, 6-15, 18-20, 23, 24 and 27-42 are now under consideration in the present application. Provided above, please find a claim listing indicating the current amendments to the previously-pending claims and claim additions on separate sheets so as to comply with the requirements set forth in 37 C.F.R. § 1.121. It is respectfully submitted that no new matter has been added.

Applicants appreciate Examiner's indication that claims 1, 4, 6-11, 23, 24 and 27-36 are allowed.

II. REJECTION UNDER 35 U.S.C. §112 SHOULD BE WITHDRAWN

Claim 20 stands rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite. As the Examiner shall ascertain, claim 20 has been amended above but not for any reasons relating to patentability thereof. In particular, this claim have been amended only to remove a reference to "BK-7" glass, and to recite "an anti-reflection-coated" glass. Accordingly, the rejection of claim 20 under 35 U.S.C. §112, second paragraph should be withdrawn.

III. REJECTIONS UNDER 35 U.S.C. §§102 and 103 SHOULD BE WITHDRAWN

Claims 12 and 13 still stand rejected under 35 U.S.C. §102(b) as being allegedly anticipated by International Publication No. WO 01/388820 which corresponds to U.S. Patent No. 6,806,963 issued to Waelti et al. (the "Waelti Publication"). Claims 14, 15 and 18-20 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over the Waelti Publication. Applicants respectfully assert that the Waelti Publication fails to teach, suggest or disclose the subject matter recited in independent claims 12 and 14 and the claims which depend therefrom for at least the following reasons.

In order for a claim to be rejected as anticipated under 35 U.S.C. § 102, each and every element as set forth in the claim must be found, either expressly or inherently described, in a single prior art reference. Manual of Patent Examining Procedures, §2131; *also see Lindeman Maschinenfabrik v. Am Hoist and Derrick*, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

Under 35 U.S.C. § 103(a), a person is not entitled to a patent even though the invention is not identically disclosed or described as set forth in §102, "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a).

The objective standard for determining obviousness under 35 U.S.C. § 103, as set forth in *Graham v. John Deere, Co.*, 383 U.S. 1 (1966), requires a factual determination to ascertain: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; and (3) the differences between

the claimed subject matter and the prior art. Based on these factual inquiries, it must then be determined, as a matter of law, whether or not the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the alleged invention was made. *Graham*, 383 U.S. at 17. Courts have held that there must be some suggestion, motivation or teaching of the desirability of making the combination claimed by the applicant (the “TSM test”). See *In re Beattie*, 974 F.2d 1309, 1311-12 (Fed. Cir. 1992). This suggestion or motivation may be derived from the prior art itself, including references or disclosures that are known to be of special interest or importance in the field, or from the nature of the problem to be solved. *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996).

Although the Supreme Court criticized the Federal Circuit’s application of the TSM test, see *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, (2007) the Court also indicated that the TSM test is not inconsistent with the *Graham* analysis recited in the *Graham v. John Deere* decision. *Id.*; see *In re Translogic Technology, Inc.*, No. 2006-1192, 2007 U.S. App. LEXIS 23969, *21 (October 12, 2007). Further, the Court underscored that “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *KSR*, 127 S. Ct. at 1741. Under the precedent established in *KSR*, however, the presence or absence of a teaching, suggestion, or motivation to make the claimed invention is merely one factor that may be weighed during the obviousness determination. *Id.* Accordingly, the TSM test should be applied from the perspective of a person of ordinary skill in the art and not the patentee,

but that person is creative and not an automaton, constrained by a rigid framework. *Id.* at 1742. However, “the reference[s] must be viewed without the benefit of hindsight afforded to the disclosure.” *In re Paulsen*, 30 F.3d 1475, 1482 (Fed. Cir. 1994).

The prior art cited in an obviousness determination should create a reasonable expectation, but not an absolute prediction, of success in producing the claimed invention. *In re O’Farrell*, 853 F.2d. 894, 903-04 (Fed. Cir. 1988). Both the suggestion and the expectation of success must be in the prior art, not in applicant’s disclosure. *Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200, 1207 (Fed. Cir. 1991) (citing *In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988)). Further, the implicit and inherent teachings of a prior art reference may be considered under a Section 103 analysis. *See In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995).

Secondary considerations such as commercial success, long-felt but unsolved needs, failure of others, and unexpected results, if present, can also be considered. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538-39 (Fed. Cir. 1983). Although these factors can be considered, they do not control the obviousness conclusion. *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988).

A. Independent Claim 12 and Dependent Claim(s)

Applicants’ invention, as recited in independent claim 12, relates to an apparatus for irradiating a sample, which comprises, *inter alia*:

- a) an interferometer forwarding an electromagnetic radiation; and
- b) a sample arm receiving the electromagnetic radiation, the sample arm including an arrangement which is configured to produce at least two radiations from the electromagnetic radiation so as to irradiate the sample, and to delay a first radiation of the at least two radiations with respect to a second radiation of the at least two radiations, **wherein the delay of a path of the first radiation compared to a path of the second radiation is at least 500µm in air.**

Applicants respectfully assert that the Waelti Publication in no way teaches or suggests that **a delay of a path of a first radiation produced in a sample arm compared to a path of a second radiation produced in the sample arm is at least about 500µm in air**, as recited in independent claim 12 of the above-identified application. In the latest Office Action, the Examiner contends that the Waelti Publication discloses “a delay of a path of a first radiation produced in a sample arm compared to a path of a second radiation produced in the sample arm is at least about 500µm in air” as recited in independent claims 1, and points to column 3, lines 37-42 of the U.S. counterpart of the Waelti Publication in support of such contention.

The Waelti Publication, as provided in the above-referenced section thereof relied on by the Examiner above, describes that “[i]f, for example, the actual length of a human eye is to be determined, it is, after all, known in advance that eyes have an optical length of 34 mm with a length tolerance of +/-4 mm. It is possible here to set a detour of 34 mm and to use the path variation unit to undertake a variation of only 8 mm.” (Waelti Publication, col. 3, lns. 37-42). Indeed, the Examiner states that because the range of 34 mm is given, the Waelti Publication allegedly satisfies the recitation that **a delay of a path of a**

first radiation produced in a sample arm compared to a path of a second radiation produced in the sample arm is at least about 500µm in air, as recited in independent claim 12. Applicants respectfully disagree.

In particular, the Waelti Publication describes that 34 mm is a path length of an eye (i.e., in a sample arm). *However*, this path length of the eye indicated in the Waelti Publication is irrelevant when describing **a delay of a path of a first radiation produced in a sample arm compared to delay of a path of a second radiation produced in the sample arm**. Indeed, according to this recitation of independent claim 12, there is **a comparison** of at least two paths delays produce in the sample arm, and *not merely a single path length* (as described in the Waelti Publication).

Thus, for at least these reasons, Applicants respectfully submit that the Waelti Publication does not render the subject matter recited in independent claim 12 anticipated. Claim 13 which depends from independent claim 12 is also not disclosed by the Waelti Publication for at least the same reasons.

Thus, withdrawal of the rejections of these claims under 35 U.S.C. § 102(b) is respectfully requested.

B. Independent Claim 14 and Dependent Claim(s)

Applicants' invention, as recited in independent claim 14, relates to an apparatus for irradiating a sample, which comprises, *inter alia*:

- a) an interferometer forwarding an electromagnetic radiation; and
- b) a sample arm receiving the electromagnetic radiation, the sample arm including an arrangement which is configured to produce at least two radiations from the electromagnetic

radiation so as to irradiate the sample, and to delay a first radiation of the at least two radiations with respect to a second radiation of the at least two radiations, wherein **the arrangement has at least one of:**

- **an optical section with a refractive index of at least 1.5, the optical section being structured to propagate the at least two radiations, or**
- **a first section which has silicon, the first section being structured to propagate the at least two radiations.**

Applicants respectfully assert that the Waelti Publication does not teach or suggest **an arrangement of a sample arm (configured to produce two radiations so as to irradiate as sample) having (i) a first optical section with a refractive index of at least 1.5, or (ii) a second section with has silicon (whereas one or more of such sections being structured to propagate the at least two radiations)**, as recited in independent claim 14 of the above-identified application. In fact, the Examiner admits that the Waelti Publication fails to disclose such subject matter. However, the Examiner then takes Official Notice that allegedly “optical elements, such as polarizing beam-splitters are commonly made of silicon with a refractive index of 4.09 or BK-7 glass with a refractive index of 1.518.” (Office Action dated July 7, 2008, p. 6, Ins. 1-3). Applicants respectfully disagree, and respectfully traverse the Official Notice indication and the 35 U.S.C. § 103(a) rejection of independent claim 14.

In particular, the explicit recitations of independent claim 14 as indicated above are provided, e.g., to perform at least two functions – (i) to split the beam, and (ii) to provide that each split beam has a specific optical path length delay with respect to the delays of other split beam(s). Surely, the specific elements and the exemplary purposes thereof are nowhere disclosed, taught or

suggested in the Waelti Publication. Further, the Examiner has not provided any reference which shows the use or specifics of such elements being used in the arrangement, as specifically recited in independent claim 14. Accordingly, for at least these reasons, **an arrangement of a sample arm (configured to produce two radiations so as to irradiate as sample) having (i) a first optical section with a refractive index of at least 1.5, or (ii) a second section with has silicon (whereas one or more of such sections being structured to propagate the at least two radiations)**, as recited in independent claim 14 is in now way obvious over the Waelti Publication, and the Examiner's Official Notice is therefore traversed.

Further, Applicants respectfully traverse the Examiner's Official Notice with respect to claims 18-20. Clearly, with respect to claims 18 and 20, nowhere in the Waelti Publication is there any indication of providing certain coatings, much less an anti-reflective coating, as recited in these claims, and the Examiner does not point to any other reference which can be combined with the Waelti Publication to teach or suggest such subject matter. Regarding claim 19, the thickness of the glass is certainly not described in the Waelti Publication, and the Examiner does not point to any other reference which can be combined with the Waelti Publication to teach or suggest such subject matter.

Thus, Applicants respectfully submit that the Waelti Publication does not render the subject matter recited in independent claim 14 obvious under 35 U.S.C. § 103(a). Claims 15, 18, 19 and 20 which depends from such independent claim 14 are also not taught and suggested in view of the Waelti

Publication for at least the same reasons, and for the additional reasons indicated herein above.

Thus, withdrawal of the rejections of these claims under 35 U.S.C. § 103(a) is respectfully requested.

IV. NEW CLAIMS 37-42

New claims 37-42 which depend from independent claim 27 have been added above to cover a certain exemplary embodiments of Applicants' invention. Support for these new claims can be found in the originally-filed specification and drawings. Applicants respectfully assert that new claims 37-42 are allowable over the art relied on by the Examiner. It is respectfully requested that a confirmation of patentability of these claims be provided in the next communication for this application to Applicants' representatives.

V. CONCLUSION

In light of the foregoing, Applicants respectfully submit that the pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited. The Examiner is invited to contact the undersigned to expedite the prosecution of this application if any issues remain outstanding.

Respectfully submitted,

Dated: November 7, 2008

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